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EXAMINER

SINGH, SATWANT K

ART UNIT PAPER NUMBER

2626

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/725,998

Applicant(s)

SHARMA ET AL.

Examiner

Satwant K. Singh

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Detailed Action

**DETAILED ACTION*****Response to Arguments***

1. Applicant's arguments filed on November 15, 2004 have been fully considered but they are not persuasive. Applicant argues that the prior art fails to disclose or suggest re-ordering of the measurement result to yield the correct measurement order.

In response to applicant's argument that Falk does not disclose or suggest re-ordering of the measurement results to yield the correct measurement order such that the measured output elements match the target elements, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

The user edited characterization profile set 208 allows a user to adjust in accordance with the measured colorant densities, which is then used to generate a calibration profile set 212. This allows the calibration profile set 212 to be updated (reads on re-ordered) without having to re-measure the density profile of the printer 101, and is capable of performing the intended use.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Falk (US 6,141,120).

3. Regarding Claim 1, Falk discloses a method of calibrating a document processing system (DPS) (reads on printer 101) comprising the steps of: providing a target (reads on calibration image 101, and test strip 600, Figs. 5, 6) comprised of plurality of target elements to the DPS; generating a DPS output from the target (reads on scanner 102 scans targets 500 and 600 to generate calibration images 215 and 216), wherein the DPS output includes a plurality of output elements corresponding to the target elements (reads on calibration profile set 211) (col. 6, lines 7-17); measuring (takes place in the print module 217 and the scanned module 207) the DPS output relative to the target for computing a calibrating function (reads on printer profile 214) for the DPS (col. 6, lines 18-26); and when the measuring indicated a mismatch between the target elements and the output elements, reordering the measured output elements for matching the measured output elements to the target elements whereby the computing of the calibrating function is done without having to re-measure the

Art Unit: 2626

output elements (reads on calibration profile is updated without having to re-measure the density profile of the printer) (col. 8, lines 40-46).

4. Regarding Claim 2, Falk discloses a method wherein the measuring indicating a mismatch is relative to a sequential order of measuring of target elements defined by the measuring step, or relative to a position flipping of the DPS output from the provided target (reads on typically the color patches are arranged in a grid format in either descending or ascending density levels) (col. 5, lines 23-65).

5. Regarding Claim 3, Falk discloses a method wherein a predetermined value for the measuring is associated with the target, and the mismatch is indicated when the computing of the calibrating function exceeds a threshold error from the predetermined value (reads on standard deviation) (col.6, lines 40-45).

6. Regarding Claim 4, Falk discloses a method wherein the reordering comprises a confirmation by a DPS operator (reads on user may edit characterization profile set) (col. 8, line 40-41).

7. Regarding Claim 5, Falk discloses a method wherein the confirmation by the DPS operator comprises selecting an order for the measuring (reads on characterization profiles are additionally stored as a set of user editable bezier curve control points for user display) (col. 4, lines 31-38).

8. Regarding Claim 6, Falk discloses a method wherein the selecting is made from a set of alternative visual layouts (reads on characterization profiles

Art Unit: 2626

are additionally stored as a set of user editable bezier curve control points for user display) (col. 4, lines 31-38).

9. Regarding Claim 7 Falk discloses disclose a method wherein the reordering comprises determining a minimum error value in the computing of the calibrating function (reads on standard deviation) (col.8, lines 1-27).

10. Regarding Claim 8, Falk discloses a method wherein the minimum error value is computed from a set of likely orderings of the output elements relative to the target elements (reads on print density module uses scanned calibration image, calibration data and scanner profile to generate printer profile) (col.8, lines 1-27).

11. Regarding Claim 9, Falk discloses a method wherein the predetermined value associated with the target is computed from a prior calibration of the DPS (reads on generate an updated calibration profile using stored printer profile) (col. 8, lines 40-46).

12. Regarding Claim 10, Falk discloses a method wherein the predetermined value associated with the target is computed from a model for the DPS (reads on printer profile 214) (col. 8, lines 1-6).

13. Regarding Claim 11, Falk discloses a method executed in a xerographic environment (reads on the principles apply to other copier types and brands and to systems having separate printers and scanners) (col. 3, lines 59-67, col. 4, lines 1-2).

14. Claims 12 and 20 are rejected for the same reason as Claim 1.

15. Claim 13 is rejected for the same reason as Claim 2.

Art Unit: 2626

16. Claim 14 is rejected for the same reason as Claim 4.
17. Claim 15 is rejected for the same reason as Claim 5.
18. Claims 16 and 22 are rejected for the same reason as Claim 7.
19. Claim 17 is rejected for the same reason as Claim 8.
20. Claims 18 and 26 are rejected for the same reason as Claim 9.
21. Claims 19 and 27 are rejected for the same reason as Claim 10.
22. Regarding Claim 21, Falk discloses a system, wherein the adjuster comprises a computation of a minimal error value for the computing of the calibration function indicative of a correct sequencing between the output elements and target elements (reads on characterization profiles are additionally stored as a set of user editable bezier curve control points for user display) (col. 4, lines 31-38).
23. Regarding Claim 23, Falk discloses a method of calibrating a DPS (reads on printer 101) from a predetermined target to expedite computing a calibration function for the DPS from a DPS output based on the target, comprising the steps of: providing the target to the DPS (reads on calibration image 500 and test strip 600, Figs. 5 and 6) and associating the target with a corresponding measuring process (reads on characterization profile set 208) (col. 4, lines 16-21); generating an output from the DPS (reads on scanner 102 scans targets 500 and 600 to generate calibration images 215 and 216); disposing the output to be measured in a selective position in a measuring device for the computing of the calibrating function (reads on how color patches are arranged) (col. 5, lines 23-65); identifying a mis-ordering of the measurements of the target in the DPS

Art Unit: 2626

output from a desired order of measurement (visually by user); based on the identified mis-ordering, providing to a user of the DPS, a representation of the correct corresponding measuring process including a desired position of the output orientation and order of measurement (reads on calibration system prints a target print having placement information that instruct a user where to place test strip and where to place a color control strip so that both can be located in scanned data) (col. 7, lines 23-26); visually validating by the user of the selected position relative to the representation (reads on user may edit characterization profile set) (col. 8, line 40-41); measuring the output relative to the target (reads on printer profile 214) (col. 6, lines 18-26); and computing the calibrating function from the measuring (reads on print density module 217) (col. 8, lines 1-27).

24. Regarding Claim 24, Falk discloses a method wherein the providing the representation of the corresponding measuring process includes imaging for the user the selective position of the disposed output that provides the measurements in a correct order with respect to the calibration process (reads on calibration image has orientation arrow, test strip placement information, grey balance patches, text information, and time and date information) (col. 5, lines 29-32) (also reads on arrangement key is printed on calibration image) (col. 5, lines 41-46) .

25. Regarding Claim 25, Falk discloses a method further including redisposing the output in response to the providing of the representation of the measuring whereby the redisposing matches the output to the corresponding measuring process (reads on use the key to generate the same pseudo-random sequence



Art Unit: 2626

that was used to place each of the color patches in order to associate each color patch with a correct absolute density) (col. 5, 40-46).

26. Regarding Claim 28, Falk discloses a method wherein the providing the representation further includes providing control commands for the measuring of the output, and wherein the providings of the representations and control commands are associated in a control file for concurrent execution with the generating of the output (reads on in the preferred embodiment, CPU, ASIC and RISC processor perform the steps of the method) (col. 3, lines 59-62) (also reads on user may edit characterization profile set 211) (col. 8, lines 40-46).

27. Regarding Claim 29, Falk discloses a method of calibrating a DPS from a predetermined target to expedite computing a calibrating function for the DPS from a DPS output based on the target, comprising the steps of: generating an output from the DPS having a plurality of patches corresponding to the target (reads on scanner 102 scans targets 500 and 600 to generate calibration images 215 and 216) (col. 6, lines 7-17); providing to a measuring device predicted measurement values for each patch on the output (reads on printer profile 214) (col. 6, lines 18-26); providing to a user of the DPS a visual representation responding to at least one control file available at the measuring device for measuring the output (reads on characterization profiles 209 are additionally stored as a set of user editable bezier curve control points for user display) (col. 4, lines 35-37), including: extracting a subset of control files which are available at the measuring device and highly probable to include a correct output layout and measurement order for the presentation to the user (reads on characterization

Art Unit: 2626

profile set 208 comprised a plurality of stored printed characterization profiles) (col. 4, lines 16-21); selection by the user of a control file for which the visual representation matches the output; disposing the output in the measuring device to match the visual representation; measuring the output with the selected control file; and computing the calibrating function from the measuring (after characterization profile set is user edited, calibration system generates an updated calibration profile set using stored printer profile) (col. 8, lines 40-46).

28. Regarding Claim 31, Falk discloses a method wherein the extracting is performed by examining a total number of predicted measurement values from the sending step and selecting control files for the measuring that are consistent with the total number (reads on characterization profile set 208 comprises a plurality of stored printed characterization profiles) (col. 4, lines 16-21).

29. Regarding Claim 32, Falk discloses a method wherein the providing predicted measurement values further comprises sending target layout information from the DPS to the measuring device (reads on once printed, calibration image is scanned) (col. 6, lines 7-9); and, the extracting is performed by selecting only those control files that are consistent with the target layout information (reads on mapping CMYK input data to calibrated C'M'Y'K' data to be printed) (col. 6, lines 18-26).

### ***Conclusion***

30. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2626

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

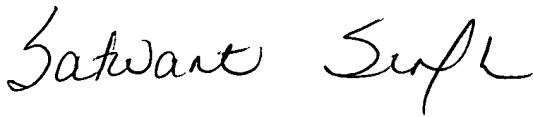
#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satwant K. Singh whose telephone number is (571) 272-7468. The examiner can normally be reached on Monday thru Friday 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A. Williams can be reached on (571) 272-7471. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



sks

Satwant K. Singh  
Examiner  
Art Unit 2626



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**SUPERVISORY PATENT EXAMINER**